State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

February 15, 2022

David Hampton
General Manager
North Kern Water Storage District
33380 Cawelo Avenue
Bakersfield, California 93308
dhampton@northkernwsd.com

Subject: Return Capacity Improvements for Regional Drought Resiliency Project (Project)
MITIGATED NEGATIVE DECLARATION (MND)
State Clearinghouse No. 2022010191

Dear Mr. Hampton:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from North Kern Water Storage District (NKWSD) for the above-referenced Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515, respectively. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take for the Project.

Bird Protection: CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nest or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird).

Water Rights: The capture of unallocated stream flows to artificially recharge groundwater aquifers is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water Code § 1200 et seq. CDFW, as Trustee Agency, is consulted by SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic and riparian ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance, and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from Project activities.

PROJECT DESCRIPTION SUMMARY

The Project includes replacing four wells and installing three discharge outfalls and approximately 3.96 miles of pipeline. The four replacement wells would be located in agricultural land within 100 feet of the existing wells. The NKWSD would connect a total of nine wells, including the four replacement wells and five other existing wells, to the

Friant-Kern Canal. Two wells would be connected to a new discharge outfall at Mile Post (MP) 129.93. Four wells would be connected to a new discharge outfall at MP 131 .29. Two wells would be connected to a new discharge outfall at MP 137.36. The NKWSD would use an existing discharge outfall (MP 142.01) for one well. The new discharge outfalls would be installed below the top-of-bank within the Friant-Kern Canal prism. Each connection would require a standard turn-in and small delivery gate for control.

The pipeline construction corridor would be up to 50 feet wide to account for the trenches, access routes, materials staging, and overburden stockpiling. A maximum of approximately 24 acres of land would be temporarily disturbed by Project activities in the pipeline construction corridor.

Proponent: NKWSD

Objectives: The proposed Project would improve long-term resiliency to drought, improve water conveyance to allow for the return of previously stored water to the NDWSD and the NKWSD banking partners, and help achieve the U.S. Bureau of Reclamation's WaterSMART Drought Response Program goals of modernizing infrastructure.

Location: The Project components will be implemented within the NKWSD service area in unincorporated Kern County, east of the communities of Shafter and Wasco.

Timeframe: Project implementation to drill the four replacement wells and install the pipeline is proposed for late winter or spring of 2022, or as soon as environmental approvals are obtained regardless of the month or season. The three Friant-Kern Canal discharge outfalls are proposed for construction during the typical maintenance period of November through January. Project activities would occur during the day, from 30 minutes prior to sunrise to 30 minutes following sunset.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist NKWSDin adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife i.e., (biological) resources. Editorial comments or other suggestions may also be included to improve the document. Based on a review of the Project description, a review of California Natural Diversity Database (CNDDB) records, a review of aerial photographs of the Project and surrounding habitat, several special status species could potentially be impacted by Project activities.

In particular, CDFW is concerned regarding potential impacts for the following special status wildlife species and habitats known to occupy the Project area: the State

threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State and federally endangered Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*); the State and federally endangered and State fully protected blunt-nosed leopard lizard (*Gambelia sila*); the State threatened Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius tricolor*); the State fully protected white-tailed kite (*Elanus leucurus*); and the State species of special concern burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), and California glossy snake (*Arizona elegans occidentalis*). Suitable habitat for Crotch bumble bee (*Bombus crotchii*) occurs in the Project vicinity. Other species of birds, amphibians, reptiles, mammals, fish, and plants also compose the local ecosystem within the Project boundary. Poso Creek and associated riparian habitat are located adjacent to the Project.

Please note that the CNDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDB does not mean a species is not present. In order to adequately assess any potential Project related impacts to biological resources, surveys conducted by a qualified wildlife biologist/botanist during the appropriate survey period(s) and using the appropriate protocol survey methodology are warranted in order to determine whether or not any special status species are present at or near the Project area.

CDFW recommends that the following modifications and/or edits be incorporated into the MND, including proposed avoidance, minimization, and compensatory measures, prior to its adoption by NKWSD.

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS)?

COMMENT 1: San Joaquin kit fox (SJKF)

Issues and Impacts: SJKF occurrences have been documented within the NKWSD boundary (CDFW 2022). Habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). Kern County supports relatively large areas of high and medium suitability SJKF habitat (Cypher et al. 2013). The Project area is bordered by highly suitable habitat in an area that is otherwise under intensive agriculture.

Mitigation Measure BIO-1 (MM BIO-1) in page 3-30 of the MND states that a pre-construction clearance survey for SJKF will be conducted not more than 30 days prior to the initiation of ground-disturbing activities. If potential dens for SJKF are found, exclusion zones will be established and maintained, in accordance with the

Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). If wildlife are observed inside a pipe, the pipe will not be moved, and the animal will be allowed to leave on its own. If trapped or injured animals are observed in a trench, Project activities will stop and escape ramps or structures will be installed to allow the animal to escape. However, such activity (capture) warrants obtaining an Incidental Take Permit (ITP) pursuant to Fish and Game Code section 2081, subdivision (b); the MND does not specify consultation with CDFW regarding take of SJKF in association with these activities.

In addition to grassland and shrubland habitats, SJKF den in right-of-ways, agricultural and fallow/ruderal habitat, dry stream channels, canal levees, etc., and populations can fluctuate over time. SJKF are also capable of occupying urban environments (Cypher and Frost 1999). SJKF may be attracted to active construction areas due to the type and level of ground-disturbing activities and the loose, friable soils resulting from intensive ground disturbance. In addition to grassland and shrubland habitats, SJKF will forage in fallow and agricultural fields and utilize streams and canals as dispersal corridors. As a result, there is potential for SJKF to occupy all areas within the Project boundary and surrounding area. Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with construction include habitat loss, den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

Recommended Mitigation Measure 1: SJKF Habitat Assessment
For all Project-specific components including construction, staging, and land conversion, CDFW recommends that a qualified biologist conduct a habitat assessment in advance of project implementation, to determine if the Project area or its immediate vicinity contains suitable habitat for SJKF.

Recommended Mitigation Measure 2: SJKF Surveys and Minimization
CDFW recommends assessing presence/absence of SJKF dens within project areas by having qualified biologists conducting surveys of Project areas and a 500-foot buffer of Project areas to detect SJKF and their sign. CDFW also recommends following the USFWS (2011) *Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance* during Project implementation.

Recommended Mitigation Measure 3: SJKF Take Authorization
SJKF activity or detection warrants consultation with CDFW to discuss how to avoid take or, if avoidance is not feasible, to acquire an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081, subdivision (b).

COMMENT 2: Tipton Kangaroo Rat (TKR)

Issues and Impacts: The MND acknowledges that TKR have been documented within areas of suitable habitat within and adjacent to NKWSD (CDFW 2022). Suitable TKR habitat includes areas of grassland, upland scrub, and alkali sink habitats that contain requisite habitat elements, such as small mammal burrows.

MM BIO-1 states that if burrows showing potential evidence of occupation by TKR are identified, a qualified biologist will determine an appropriate exclusion zone that will be maintained to prevent disturbance of the burrows and occupants. The MND does not specify a biological basis for determining potential occupation by TKR or how an adequate no-disturbance buffer will be determined to avoid take or significant impacts.

Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to TKR. Very little suitable habitat for this species remains along the edges of the southern San Joaquin Valley floor (ESRP 2019a). Areas of suitable habitat within NKWSD represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. Without appropriate avoidance and minimization measures for TKR, potential significant impacts include loss of habitat, burrow collapse, inadvertent entrapment of individuals, reduced reproductive success such as reduced health or vigor of young, and direct mortality of individuals.

Recommended Mitigation Measure 4: TKR Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project area or its immediate vicinity contains suitable habitat for TKR.

Recommended Mitigation Measure 5: TKR Avoidance
If suitable habitat is present, CDFW advises maintenance of a 50-foot minimum no-disturbance buffer around all small mammal burrow entrances of suitable size for TKR use.

Recommended Mitigation Measure 6: TKR Surveys
If burrow avoidance is not feasible, CDFW recommends that focused protocol-level trapping surveys be conducted by a qualified wildlife biologist holding CDFW and USFWS permits to do so, to determine if TKR occurs in the Project area. CDFW advises that these surveys be conducted in accordance with the USFWS (2013) *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats,* well in advance of ground-disturbing activities to determine whether impacts to TKR could occur.

Recommended Mitigation Measure 7: TKR Take Authorization
TKR activity or detection warrants consultation with CDFW to discuss how to avoid take or, if avoidance is not feasible, to acquire an ITP prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081, subdivision (b).

COMMENT 3: Swainson's Hawk (SWHA) and White-Tailed Kite (WTKI)

Issues and Impacts: The MND acknowledges that SWHA and WTKI are known to the Project area and have the potential to nest in riparian habitat and other mature trees located within the Project site and within ½ mile of the Project. Suitable foraging habitat for these species exists within the vicinity of the Project site, including annual grassland, alfalfa or grain fields, and livestock pasture. In addition, conversion of undeveloped and agricultural land can directly influence distribution and abundance of SWHA, due to the reduction in foraging habitat. Groundwater pumping, surface water diversion, and habitat conversion may result in loss of riparian habitat and subsequent loss of nesting habitat. Without appropriate avoidance and minimization measures for SWHA and WTKI, potential significant impacts include nest abandonment and reduced reproductive success that includes mortality of young, and reduced health and vigor of eggs and/or young.

Mitigation Measure BIO-2b on page 3-31 of the MND states that a qualified biologist will conduct surveys of potential SWHA within ¼ mile using the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SWHA TAC 2000). At a minimum, a survey will be conducted within 14 days before Project activities begin near suitable nest trees, from April through August. BIO-2b states that if an active SWHA or WTKI nest is observed, a protective buffer will be established and implemented until the nest is no longer active. The MND analysis does not provide a biological basis of a ¼-mile survey radius for SWHA nests or how a no-disturbance buffer will be determined as adequate to avoid significant impacts, including but not limited to take of individuals through nest failure or other means, as a result of Project implementation.

The trees and riparian habitat within the Project area represent some of the only remaining suitable nesting habitat in the local vicinity. Depending on the timing of construction, activities including noise, vibration, and movement of workers or equipment could affect nests and have the potential to result in nest abandonment, significantly impacting local nesting SWHA and WTKI. In addition, agricultural cropping patterns can directly influence distribution and abundance of SWHA. For example, SWHA can forage in grasslands, pasture, hay crops, and low growing irrigated crops; however, other agricultural crops such as orchards and vineyards are incompatible with SWHA foraging (Estep 2009, Swolgaard et al. 2008).

In the San Joaquin Valley, suitable nest trees may be a limiting factor for SWHA productivity. The loss of suitable nest trees, particularly in proximity to foraging

habitat, has the potential to significantly impact local SWHA (CDFW 2016). CDFW considers removal of known bird-of-prey nest trees, even outside of the nesting season, a potentially significant impact under CEQA, and, in the case of SWHA, it could also result in take under CESA. Project activities near the nest that differ from baseline disturbance regimes in type, timing, and/or magnitude can affect adults caring for eggs and young in the nest, and can affect nestling behavior. Project activities including noise, vibration, odors, visual disturbance, and movement of workers or equipment could affect nesting individuals and have the potential to result in nest abandonment or reduced nesting success, significantly impacting local nesting SWHA and WTKI.

Recommended Mitigation Measure 8: SWHA and WTKI Nest Tree Avoidance and Mitigation
In addition to avoiding occupied nest trees, CDFW recommends that impacts to known nest trees be avoided at all times of year, or that mitigation occurs for these impacts. Regardless of nesting status, if potential or known SWHA and WTKI nesting trees are removed, CDFW recommends they be replaced with an appropriate native tree species, planted at a ratio of 3:1 (replaced to removed), in an area that will be protected in perpetuity via recordation of a Conservation Easement. This mitigation will offset potential impacts of the loss of nesting habitat.

Recommended Mitigation Measure 9: Focused SWHA and WTKI Surveys
To reduce potential Project-related impacts to SWHA and WTKI, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting birds of prey, including SWHA and WTKI, following the survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) during the nesting season of or prior to Project initiation, within the Project area and a ½-mile buffer around the Project area. In addition, if Project activities will take place during the typical breeding season (February 1 through September 15), CDFW recommends that additional preconstruction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of construction.

Recommended Mitigation Measure 10: SWHA and WTKI Buffers
If an active SWHA or WTKI nest is found during preconstruction surveys, CDFW recommends implementing a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest site or parental care for survival.

Recommended Mitigation Measure 11: SWHA Take Authorization
If a ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted, and an ITP for SWHA may be necessary prior to project implementation to avoid unauthorized take, pursuant to Fish and Game Code section 2081, subdivision (b).

Pursuant to Fish and Game Code section 3511, CDFW cannot authorize incidental take of WTKI. Therefore, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer around identified WTKI nest(s) until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

COMMENT 4: Tricolored Blackbird (TRBL)

Issues and Impacts: TRBL are known to occur in the Project area (CDFW 2022, UC Davis 2021). Review of aerial imagery indicates that the Project area includes suitable habitat types including wetlands, ponds, and flood-irrigated agricultural land, which is an increasingly important nesting habitat type for TRBL (Meese et al. 2017). TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014), and approximately 86% of the global population is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). In addition, TRBL have been forming larger colonies that contain progressively larger proportions of the species' total population (Kelsey 2008). In 2008, 55% of the species' global population nested in only two colonies in silage fields (Kelsey 2008). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, disturbance to nesting colonies can cause entire nest colony site abandonment and loss of all unfledged nests, significantly impacting TRBL populations (Meese et al. 2014). Without appropriate avoidance and minimization measures for TRBL, potential significant impacts associated with subsequent development include nesting habitat loss, nest and/or colony abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

Recommended Mitigation Measure 12: TRBL Surveys
CDFW recommends that the Project activities be timed to avoid the typical bird-breeding season of February 1 through September 15. If Project activity that could disrupt nesting must take place during that time, CDFW recommends that a qualified biologist conduct surveys for nesting TRBL no more than 10 days prior to the start of implementation to evaluate presence or absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

Recommended Mitigation Measure 13: TRBL Colony Avoidance
If an active TRBL nesting colony is found during surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer, in accordance with CDFW's (2015) *Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015*, until the breeding season has ended or until a qualified biologist has determined that nesting has ceased and the young have fledged and are no longer reliant upon the colony or parental care for survival. TRBL colonies can expand over time and for this reason, CDFW recommends that an active colony be reassessed to determine its extent within 10 days prior to Project initiation.

Recommended Mitigation Measure 14: TRBL Take Authorization
In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss whether the Project can avoid take and, if take avoidance is not feasible, to acquire an ITP pursuant to Fish and Game Code section 2081, subdivision (b), prior to any Project activities.

COMMENT 5: Blunt-nosed leopard lizard (BNLL)

Issues and Impacts: The MND acknowledges the potential for BNLL to occur within and adjacent to the NKWSD northern boundary at Poso Creek (CDFW 2022). Suitable BNLL habitat includes areas of grassland and upland scrub that contain requisite habitat elements, such as small mammal burrows. BNLL also use open space patches between suitable habitats, including disturbed sites and unpaved access roadways.

MM BIO-1 states that if burrows showing evidence of occupation by BNLL are identified, a qualified biologist will determine an appropriate exclusion zone that will be maintained to prevent disturbance of the burrows and occupants. The MND does not specify a biological basis for determining potential occupation of for how a no-disturbance buffer will be determined as adequate to avoid significant impacts, including but not limited to take of individuals through nest failure or other means, as a result of Project implementation. Without appropriate avoidance and minimization measures for BNLL, potentially significant impacts associated with ground-disturbing activities include habitat loss, burrow collapse, reduced reproductive success, reduced health and vigor of eggs and/or young, and direct mortality.

Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to BNLL (ESRP 2019b). The range for BNLL now consists of scattered parcels of undeveloped land within the valley floor and the foothills of the Coast Range (USFWS 1998). Some undeveloped areas with suitable BNLL habitat may occur within the NKWSD boundary along Poso Creek.

Recommended Mitigation Measure 15: BNLL Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project area or its immediate vicinity contains suitable habitat for BNLL.

Recommended Mitigation Measure 16: BNLL Surveys
If suitable habitat is present, prior to initiating any vegetation- or ground-disturbance activities, CDFW recommends conducting surveys in accordance with the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard* (CDFW 2019). This recommended survey protocol, designed to optimize BNLL detectability, reasonably assures CDFW that ground disturbance will not result in take of this fully protected species.

CDFW advises completion of BNLL surveys no more than one year prior to initiation of ground disturbance. Please note that protocol-level surveys must be conducted on multiple dates during late spring, summer, and fall, and that within these time periods, there are specific protocol-level date, temperature, and time parameters, which must be adhered to. As a result, protocol-level surveys for BNLL are not synonymous with 30-day "preconstruction surveys" often recommended for other wildlife species. In addition, the BNLL protocol specifies different survey effort requirements based on whether the disturbance results from maintenance activities or if the disturbance results in habitat removal (CDFW 2019).

Recommended Mitigation Measure 17: BNLL Take Avoidance
CDFW cannot authorize the Project-related incidental take of BNLL. BNLL detection during protocol level surveys warrants consultation with CDFW to discuss whether take of BNLL can be avoided during Project activities.

COMMENT 6: Crotch Bumble Bee (*Bombus crotchii*; CBB)

Issues and Impacts: CBB have been documented to occur within the vicinity of the Project area (CDFW 2022). Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014; Hatfield et al. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations.

CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest that there have been sharp declines in relative abundance of CBB by 98% and persistence by 80% over the last ten years. Without appropriate avoidance and minimization measures for CBB, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality.

Recommended Mitigation Measure 18: CBB Surveys and Avoidance
CDFW recommends that all small mammal burrows and thatched/bunch grasses be surveyed for the species during the optimal flight period of April 1 through July 31

during the peak blooming period of preferred plant species prior to Project implementation. Avoidance of detected queens or workers is encouraged to allow CBB to leave the Project site of their own volition. Avoidance and protection of detected nests prior to or during Project implementation is encouraged with delineation and observance of a 50-foot no-disturbance buffer.

COMMENT 7: Burrowing Owl (BUOW)

Issues and Impacts: BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and bordering the NKWSD, supports grassland habitat. Potentially significant direct impacts associated with subsequent activities and land conversion include habitat loss, burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The NKWSD boundary contains remnant undeveloped land but is otherwise intensively managed for agriculture; therefore, subsequent ground-disturbing activities associated with subsequent constructions have the potential to significantly impact local BUOW populations.

Recommended Mitigation Measure 19: BUOW Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of implementation of Project-specific activities, to determine if the Project area or its vicinity contains suitable habitat for BUOW.

Recommended Mitigation Measure 20: BUOW Surveys
If suitable habitat is present on or in the vicinity of the Project area, CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Specifically, these reports suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (i.e., April 15 to July 15), when BUOW are most detectable. In addition, CDFW advises that surveys include a minimum 500-foot buffer around the Project area.

Recommended Mitigation Measure 21: BUOW Avoidance
CDFW recommends that no-disturbance buffers, as outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), be implemented prior to and during any ground-disturbing activities, and specifically that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved

by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Recommended Mitigation Measure 22: BUOW Passive Relocation and Mitigation

If BUOW are found within these recommended buffers and avoidance is not possible, it is important to note that excluding birds from burrows is not a take avoidance, minimization, or mitigation method and is instead considered a potentially significant impact under CEQA (CDFG 2012). If it is necessary for Project implementation, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW then recommends mitigation in the form of replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1:1) to mitigate for evicting BUOW and the loss of burrows. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance at a rate that is sufficient to detect BUOW if they return.

COMMENT 8: Other State Species of Special Concern

Issues and Impacts: American badger and California glossy snake are known to inhabit grassland and upland shrub areas with friable soils (Williams 1986, Thomson et al. 2016). These species have been documented to occur in the vicinity of the Project, which supports requisite habitat elements for these species (CDFW 2022), and habitat loss threatens these species (Williams 1986, Thomson et al. 2016). Habitat within and adjacent to the Project represents some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. Without appropriate avoidance and minimization measures for these species, potentially significant impacts associated with ground disturbance include habitat loss, nest/den/burrow abandonment, which may result in reduced health or vigor of eggs and/or young, and direct mortality.

Recommended Mitigation Measure 23: Habitat Assessment
CDFW recommends that a qualified biologist conduct a habitat assessment in advance of project implementation, to determine if Project areas or their immediate vicinity contain suitable habitat for the species mentioned above.

Recommended Mitigation Measure 24: Surveys
If suitable habitat is present, CDFW recommends that a qualified biologist conduct focused surveys for the species and their requisite habitat features to evaluate potential impacts resulting from ground and vegetation disturbance.

Recommended Mitigation Measure 25: Avoidance
Avoidance whenever possible is encouraged via delineation and observance of a 50-foot no-disturbance buffer around dens of mammals like the American badger as well as the entrances of burrows that can provide refuge for small mammals, reptiles, and amphibians.

Editorial Comments and/or Suggestions

Lake and Streambed Alteration: Project activities that have the potential to substantially change the bed, bank, and channel of streams and associated wetlands may be subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation): (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of a Lake or Streambed Alteration (LSA) Agreement; therefore, if the CEQA document approved for the Project does not adequately describe the Project and its impacts, a subsequent CEQA analysis may be necessary for LSA Agreement issuance. Additional information on notification requirements is available through the Central Region LSA Program at (559) 243-4593 or R4LSA@wildlife.ca.gov, and the CDFW website: https://wildlife.ca.gov/Conservation/LSA .

Nesting birds: CDFW encourages that Project implementation occur during the bird non-nesting season; however, if Project activities must occur during the breeding season (i.e., February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that

could potentially be impacted by the Project are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e. nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends that a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends that the work causing that change cease and that CDFW be consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers.

Endangered Species Act Consultation: CDFW recommends consultation with the USFWS prior to Project ground disturbance, due to potential impacts to Federal listed species. Take under the Federal Endangered Species Act (FESA) is more stringently defined than under CESA; take under FESA may also include significant habitat modification or degradation that could result in death or injury to a listed species, by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of Project implementation.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be obtained at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data . The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist NKWSD in identifying and mitigating Project impacts on biological resources. If you have questions regarding this letter, please contact Annette Tenneboe, Senior Environmental Scientist (Specialist), at (559) 580-3202 or by email at Annette.Tenneboe@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

cc: Office of Planning and Research, State Clearinghouse, Sacramento

Patricia Cole
Division Chief, San Joaquin Valley Division
Sacramento Fish and Wildlife Office
United States Fish and Wildlife Service
Patricia_Cole@fws.gov

ec: Annette Tenneboe, California Department of Fish and Wildlife

REFERENCES

California Burrowing Owl Consortium (CBOC). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Pages 171-177 *in* Lincer, J. L. and K. Steenhof (editors). 1993. The Burrowing Owl, Its Biology and Management. Raptor Research Report Number 9.

California Department of Fish and Game (CDFG). 2 012. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game. March 7, 2012.

California Department of Fish and Wildlife (CDFW). 2015. Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015. March 19, 2015.

CDFW. 2016. Status Review: Swainson's hawk (*Buteo swainsoni*) in California. Reported to California Fish and Game Commission. Five years status report.

CDFW. 2019. Approved Survey Methodology for the Blunt-nosed Leopard Lizard. California Department of Fish and Wildlife, October 2019 (revised).

CDFW. 2022. Biogeographic Information and Observation System (BIOS). https://www.wildlife.ca.gov/Data/BIOS. Accessed 04 February 2022.

Cypher, B. and N. Frost. 1999. Condition of San Joaquin kit foxes in urban and exurban habitats. Journal of Wildlife Management 63: 930–938.

Cypher, B.L., S.E. Phillips, and P.A. Kelly. 2013. Quantity and distribution of suitable habitat for endangered San Joaquin kit foxes: conservation implications. Canid Biology & Conservation 16(7): 25-31. http://www.canids.org/CBC/16/San_Joaquin_kit_fox_habitat_suitability.pdf

Endangered Species Recovery Program (ESRP). 2019a. Tipton kangaroo rat. http://esrp.csustan.edu/speciesprofiles/profile.php?sp=amne. Accessed -4 February 2022.

ESRP. 2019b. Blunt-nosed leopard lizard. http://esrp.csustan.edu/speciesprofiles/profile.php?sp=gasi. Accessed 20 September 2019.

Estep, J. 2009. The influence of vegetation structure on Swainson's hawk (*Buteo swainsoni*) foraging habitat suitability in Yolo County, California. Prepared for the Yolo Natural Heritage Program, Woodland, CA.

Gervais, J. A., D. K. Rosenberg, and L. A. Comrack. 2008. Burrowing Owl (*Athene cunicularia*) *In* California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California (W. D. Shuford and T. Gardali, editors). Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Goulson, D. 2010. Bumblebees: behaviour, ecology, and conservation. Oxford University Press, New York. 317pp.

Hatfield, R, S. Colla, S. Jepsen, L. Richardson, R. Thorp, and S. F. Jordan. 2014. Draft IUCN Assessments for North American *Bombus* spp. for the North American IUCN Bumble Bee Specialist Group. The Xerces Society for Invertebrate Conservation, www.xerces.org, Portland, OR.

Hatfield, R., S. Jepsen, R. Thorp, L. Richardson. and S. Colla. 2015. Bombus crotchii. The IUCN Red List of Threatened Species. http://dx.doi.org/10.2305/IUCN.UK.2015--2.RLTS.T44937582A46440211.en. Accessed October 27, 2020.

Kelsey, R. 2008. Results of the tricolored blackbird 2008 census. Report submitted to U.S. Fish and Wildlife Service, Portland, OR, USA.

Meese, R. J., E. C. Beedy, and W. J. Hamilton, III. 2014. Tricolored blackbird (*Agelaius tricolor*), The Birds of North America (P. G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: https://birdsna-org.bnaproxy.birds.cornell.edu/Species-Account/bna/species/tribla. Accessed December 15, 2017.

Meese, R. J. 2017. Results of the 2017 Tricolored Blackbird Statewide Survey. California Department of Fish and Wildlife, Wildlife Branch, Nongame Wildlife Program Report 2017-04, Sacramento, CA. 27 pp. + appendices.

Orians, G. H. 1961. The ecology of blackbird (*Agelaius*) social systems. Ecological Monographs 31(3): 285–312.

Swainson's Hawk Technical Advisory Committee (SWHA TAC). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley of California. Swainson's Hawk Technical Advisory Committee. May 31, 2000.

Swolgaard, C. A., K. A. Reeves, and D. A. Bell. 2008. Foraging by Swainson's hawks in a vineyard-dominated landscape. Journal of Raptor Research 42(3): 188-196.

Thomson, R. C., A. N. Wright, and H. B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. California Department of Fish and Wildlife and University of California Press: 84-92.

University of California, Davis (UC Davis). 2021. Tricolored blackbird portal. https://tricolor.ice.ucdavis.edu/

United States Fish and Wildlife Service (USFWS). 1998. Blunt-nosed leopard lizard *In* Recovery Plan for Upland Species of the San Joaquin Valley, California. Region 1, Portland, OR. 319 pp.

USFWS. 2011. Standard Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance. United States Fish and Wildlife Service. January 2011.

USFWS. 2013. Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats. United States Fish and Wildlife Service. March 2013. https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/SFWO%20Final%20San%20Joaquin%20K-Rat%20Trapping%20Protocol-2013.pdf

Weintraub, K., T. L. George, and S. J. Dinsmore. 2016. Nest survival of tricolored blackbirds in California's Central Valley. Condor 118(4): 850–861.

Williams, D. F. 1986. Mammalian species of special concern in California. Calif. Dept. Fish and Game, Sacramento. Admin. Rep. 86-1. 112pp.

Williams, P. H., R. W. Thorp, L. L. Richardson, and S .R. Colla. 2014. Bumble bees of North America: An Identification guide. Princeton University Press, Princeton, New Jersey. 208pp.

Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Center for Food Safety. 2018. A petition to the State of California Fish and Game Commission to list the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act. October 2018.

Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: North Kern Water Storage District
Return Capacity Improvements for Regional Drought Resiliency Project

STATE CLEARINGHOUSE No.: 2022010191

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Before Project Activity	
Recommended Mitigation Measure 1: SJKF Habitat Assessment	
Recommended Mitigation Measure 2: SJKF Surveys and Minimization	
Recommended Mitigation Measure 3: SJKF Take Authorization	
Recommended Mitigation Measure 4: TKR Habitat Assessment	
Recommended Mitigation Measure 5: TKR Avoidance	
Recommended Mitigation Measure 6: TKR Surveys	
Recommended Mitigation Measure 7: TKR Take Authorization	
Recommended Mitigation Measure 8: SWHA and WTKI Nest Tree Avoidance and Mitigation	
Recommended Mitigation Measure 9: Focused SWHA and WTKI Surveys	
Recommended Mitigation Measure 10: SWHA and WTKI Buffers	
Recommended Mitigation Measure 11: SWHA Take Authorization	
Recommended Mitigation Measure 12: TRBL Surveys	
Recommended Mitigation Measure 13: TRBL Colony Avoidance	
Recommended Mitigation Measure 14: TRBL Take Authorization	
Recommended Mitigation Measure15: BNLL Habitat Assessment	
Recommended Mitigation Measure 16: BNLL Surveys	

RECOMMENDED MITIGATION MEASURES	STATUS/DATE/INITIALS
Recommended Mitigation Measure 17: BNLL Take Avoidance	
Recommended Mitigation Measure 18: CBB Surveys and Avoidance	
Recommended Mitigation Measure 19: BUOW Habitat Assessment	
Recommended Mitigation Measure 20: BUOW Surveys	
Recommended Mitigation Measure 21: BUOW Avoidance	
Recommended Mitigation Measure 22: BUOW Eviction and Mitigation	
Recommended Mitigation Measure 23: Habitat Assessment – American badger and California glossy snake.	
Recommended Mitigation Measure 24: Surveys – American badger and California glossy snake.	
Recommended Mitigation Measure 25: Avoidance – American badger and California glossy snake.	
During Project Activity	
Recommended Mitigation Measure 2: SJKF Surveys and Minimization	
Recommended Mitigation Measure 5: TKR Avoidance	
Recommended Mitigation Measure 8: SWHA and WTKI Nest Tree Avoidance and Mitigation	
Recommended Mitigation Measure 10: SWHA and WTKI Buffers	
Recommended Mitigation Measure 13: TRBL Colony Avoidance	
Recommended Mitigation Measure 17: BNLL Take Avoidance	
Recommended Mitigation Measure 18: CBB Surveys and Avoidance	
Recommended Mitigation Measure 21: BUOW Avoidance	
Recommended Mitigation Measure 25: Avoidance – American badger and California glossy snake.	